UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

DATE: March 28, 2002

UBJECT: National Remedy Review Board Recommendations -
Semet Residue Ponds Sub-Site of the Onondaga Lake Superfund Site

FROM: John S. Frisco, Manager John S. Frisco
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EPA - Region 2

TO: Bruce K. Means, Chair
National Remedy Review Board

I am writing in response to your memorandum, dated March 21, 2002, providing the advisory recommendations of the National Remedy Review Board (NRRB) in connection with its review of the proposed remedial action for the Semet Residue Ponds sub-site of the Onondaga Lake Superfund site. Please note that the New York State Department of Environmental Conservation (NYSDEC) was consulted in the preparation of this response.

Let me first express both the region's and the state's appreciation to the board for its expedited review of the proposed remedy for the Semet site. Our specific responses to the board's advisory recommendations are provided below. For convenience purposes, each recommendation is presented in the order identified in your memorandum followed by our response.

Responses to NRRB Advisory Recommendations

Comment 1: The state's proposed remedy includes two major components that together address both the Semet Residue Ponds (contents and residuals) and their associated contaminated ground water. Although this proposal was presented as a final action, the board notes that the proposed remedy appears to be a source control action designed to respond to the acute risks described in the package rather than longer-term or chronic health and environmental threats. One component of the preferred action (Alternative SEM-2) would remove principal threat waste from the environment and recycle it; but the state does not describe in detail how any residuals (non-recyclable contaminated media) would be managed. The second component (Alternative GW-3) would address highly-contaminated ground water through containment rather than active restoration to achieve cleanup standards. Consequently, the board believes that if these actions are selected as a "final" remedy for the site, significant questions remain about the actions and their consistency with Superfund guidance and the NCP.

Response 1: After careful consideration of this recommendation, the region and the state believe it is most appropriate to address the Semet pond residuals that cannot be processed for reuse as part of a subsequent operable unit at the site. The remedy decision documents will reflect this determination. In addition, it is recognized

that the groundwater action is intended to contain highly-contaminated ground water and prevent its migration into Onondaga Lake. This action is considered to be a necessary component of the overall remediation plan for the ground water. As a further complication, the groundwater plume at the Semet Residue Ponds site is known to overlap the groundwater plume at the adjacent Willis Avenue site. Any final decision on the groundwater contamination associated with the Semet Ponds site, therefore, will have to include the effects of the Willis Avenue site. The Record of Decision (ROD) language will be clarified so it is clear that a final decision on groundwater restoration will also be the subject of a future decision document.

Comment 2: The board notes that the site review package contained very little information relating to chronic risks to human health or environmental receptors (e.g., fish) associated with the waste ponds and the underlying contaminated ground water. However, the numerical cleanup goals presented in the package, in fact, relate to chronic risks. The package also did not present a clear risk-based rationale for the need to prevent contaminant migration into Onondaga Lake. The board recommends that the decision documents further describe the acute and chronic risks posed by the site (including any threats to the lake), the reduction in risk which is expected to result from implementation of the remedy, and how the actions contribute to achieving any numerical cleanup goals. In addition, the decision documents should clarify how the proposed actions for this sub-site contribute to and are consistent with the area-wide remediation strategy for the Onondaga Lake Superfund Site.

Response 2: The region and the state agree to further document the chronic risks to human health and environmental receptors associated with the site in connection with the selection of final remedies for the contaminated media. As indicated above, final remedy decisions for pond residuals and groundwater restoration will be the subject of future RODs. With respect to the groundwater containment action, there is sufficient information to support an action which prevents the migration of contaminated ground water to Tributary 5A and Onondaga Lake based on the impacts to human health and environmental receptors. For example, the reported groundwater benzene concentration of 55,000 ug/L is substantially greater than the NYSDEC ambient water quality standard of 10 ug/L for Human Consumption of Fish in Onondaga Lake's Class C waters, and it also exceeds NYSDEC's 1998 Water Quality Criterion (WQC) for fish propagation protection (210 ugIL). The reported toluene groundwater concentration of 3,900 ug/L is significantly higher than the WQC of 100 ug/L, and naphthalene at 1,100 ug/L exceeds the WQC of 13 ug/L. Water quality samples contained benzene at concentrations ranging from 87 to 110 ug/L in Onondaga Lake and from 18 to 110 ug/L in Tributary 5A. These values also exceed the NYSDEC ambient water quality standard of 10 ug/L for Human Consumption of Fish in Onondaga Lake's Class C waters.

In addition, the reported benzene concentration in lake sediment of 16,000 ug/kg greatly exceeds the NYSDEC Human Health Bioaccumulation sediment criteria of 18 ug/kg[1]. This benzene concentration also exceeds the Benthic Aquatic Life Acute and Chronic Toxicity sediment criteria of 3,090 ug/kg and 840 ug/kg, respectively[2]. These data provide a clear indication of the human health and environmental risks posed by the highly-contaminated ground water associated with the Semet Ponds. The groundwater containment remedy is also consistent with other actions already implemented or selected at other Onondaga Lake sub-sites, such as the Ley Creek PCB Dredgings sub-site and the LCP Bridge Street sub-site. The remedies for these sub-sites include measures to eliminate the migration of contaminated surface and ground waters to Onondaga Lake.

Comment 3: The state indicates that one remedial action objective (RAO) for this cleanup plan is to restore, to the extent practicable, groundwater quality to levels which meet state and federal drinking water standards. However, none of the groundwater alternatives include extraction strategies designed to meet this RAO. The board notes that the groundwater alternatives appear to be designed only for containment of groundwater contamination that is currently migrating into the lake and Tributary 5A. For these reasons, and for those identified in the next comment below, the board recommends that the state either delete this "restoration" RAO for the action (and follow up with appropriate analysis of restoration alternatives in a subsequent action) or demonstrate how restoration will be achieved by the current proposed remedy.

Response 3: As indicated previously, the current groundwater remedy involves containment only to prevent contaminant migration into Onondaga Lake and Tributary 5A. Groundwater restoration will be addressed in a future decision document. Therefore, the restoration RAO will not be included in the ROD.

Comment 4: The package notes that the preferred groundwater alternative (Alternative GW-3) is not expected to attain MCLs and would result in the need to waive Applicable or Relevant and Appropriate Requirements (ARARs) for certain areas of the site. Based on the package and presentation, the board believes there is not sufficient justification at the current time to support an ARAR waiver based on technical impracticability (TI) consistent with EPA guidance (OSWER Directive 9234.2-25, Guidance for Evaluating the Technical Impracticability of Ground-Water

[1] The value is based on an approximate mean lake sediment organic carbon content of 3.0 % and the NYSDEC (1999) sediment criteria for human health bioaccumulation of 0.6 $ug_{benzene}/g_{oc}$.

[2] The value is based on an approximate mean lake sediment organic carbon content of 3.0% and the NYSDEC(1999) sediment criteria for benthic aquatic life acute and chronic toxicity of 103 $ug_{benzene}/g_{oc}$ and 28 $ug_{benzene}/g_{oc}$, respectively.

Restoration, September 1993). The board recommends that the state phase groundwater cleanup actions for this sub-site, implementing this action as an interim source control and containment remedy for ground water. As indicated in the guidance, generally, it is most appropriate to consider the need for an ARAR waiver based on technical impracticability only after appropriate source control measures have been implemented and their impact on groundwater contamination evaluated. Following such measures, and based on the new information gathered, the state might then consider the feasibility of remedial alternatives designed to restore ground water to state and federal drinking water standards.

Response 4: The region agrees with the board's recommendation and a TI waiver will not be included in the subject ROD for the Semet site. Although the TI guidance does state that, in general, TI decisions should be made only after interim or full-scale aquifer remediation systems are implemented, the guidance also indicates that, in some cases, TI decisions may be made prior to remedy implementation provided that they can be supported adequately by detailed site characterization and data analysis. It should be noted that site characterization data to support both the Semet Residue Ponds groundwater containment remedy and a proposed interim remedial measure to contain ground water at the Willis Avenue site has recently been generated. This data along with other information involving the Willis Avenue RI/FS will be evaluated to determine whether it can be used to support a TI waiver at the Semet site prior to implementation of the full-scale groundwater remedy.

Comment 5: The information package presented to the board did not identify the remedy for the ponds' residual organics (i.e., pond contents that cannot be processed for recycling), nor did the document describe the decision logic to be employed to select an appropriate remedy for these residuals (e.g., capping, removal, treatment, no action, etc.). In addition, the cost information provided to the board did not include costs for addressing these residuals. The board recommends that the state either describe in more detail how the residual material will be addressed, including an evaluation of the associated costs, or select a remedy for this residual material as part of a subsequent operable unit.

Response 5: As indicated previously, the residual pond material that cannot be processed for recycling will be addressed as part of a future operable unit at the site. The decision document relating to this operable unit will identify the remedy, along with the appropriate technical and cost evaluation, to support the selection of a remedy for the ponds'residuals.

Comment 6: The package presents cleanup levels based on New York State's Technical and Administrative Guidance Memorandum No. 94-HWR-4046 (or TAGMs) for soils (viewed as "To-Be-Considered" criteria for the site). The decision document

should clarify whether (and how) the TAGMs will be used to identify the residual waste to be addressed after completion of the beneficial reuse (or incineration) of materials from the ponds.

Response 6: Again, as noted above, the residual waste materials which remain in the ponds after implementation of the reuse remedy will be addressed as part of a future operable unit at the site. The TAGM issue raised by the board will be discussed in the appropriate decision document for that operable unit. The board should be advised, however, that the region has viewed TAGMs as "To-Be-Considered" criteria for other Superfund cleanups in the State of New York.

Comment 7: The board notes that there may be some legal issues related to this state enforcement-lead action (e.g., ARARs waivers, the need to obtain permits), and encourages the region and state to address them in the remedy selection decision documents.

Response 7: The region notes the board's comment regarding potential legal issues related to the subject action. However, as discussed above, ARAR waivers are not being sought at this time. If appropriate, they may be considered in connection with the selection of final remedies for the contaminated media at the site which will be addressed as part of future operable units.

Any issue concerning the need for permits at the site will be addressed in the context of section 121(e)(1) of CERCLA which provides that "... [no] Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely on site, where such remedial action is selected and carried out in compliance with this section." EPA regulations specify that response actions conducted pursuant to several sections of CERCLA, including section 104, are included within the permit exemption provided by CERCLA section 121(e)(1). See 40 C.F.R. 300.400(e). Actions taken pursuant to section 104 include actions taken by "... a State or political subdivision operating pursuant to a contract or cooperative agreement with EPA executed pursuant to CERCLA section 104(d)(1), under which EPA selects (or must approve) the remedy." Permits and Permit "Equivalency" Processes for CERCLA On-site Response Actions, EPA OSWER Directive 9355.7-03 (February 19, 1992) at pages 2-3.

The state is the lead agency for the Onondaga Lake site pursuant to a cooperative agreement entered with EPA pursuant to section 104(d)(1) of the Act. Pursuant to this cooperative agreement, EPA has selected remedies together with the state or approved the state's remedy selections. EPA will be a signatory to the ROD for the Semet Residue Ponds sub-site and will be selecting the remedy together with the state. For these reasons, the region believes that selection of the remedies for the site come within the permit exemption provisions of section 121(e)(1).

It should be noted that where the state and EPA determine that on-site actions will be exempt from permitting requirements, they will ensure that such actions meet all the substantive provisions of permitting regulations.

In closing, the region and the state very much appreciate the advice and recommendations of the board in connection with its review of the remedy for the Semet Residue Ponds site. If you have any questions or want to further discuss this matter, do not hesitate to contact me.

cc: Tracy Smith, NYSDEC